

## Safety device - PSR-SCP- 24DC/RSM4/4X1 - 2981538

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Two-channel speed and downtime monitor up to SIL 3 or Cat. 4, PL e according to EN ISO 13849, 4 N/O contacts, suitable for connecting incremental encoders and initiators, plug-in screw connection terminal blocks, width: 45 mm

### Product Features

- ✓ Easy configuration via software (PSR-RSM4)
- ✓ Up to SIL 3 according to IEC 61508
- ✓ Standard sensors can be connected



### Key Commercial Data

|                                      |          |
|--------------------------------------|----------|
| Packing unit                         | 1 pc     |
| Weight per Piece (excluding packing) | 346.8 g  |
| Custom tariff number                 | 90328900 |
| Country of origin                    | Germany  |

### Technical data

#### Note

|                         |   |
|-------------------------|---|
| Utilization restriction | EMC: class A product, see manufacturer's declaration in the download area |
|-------------------------|---|

#### Dimensions

|        |          |
|--------|----------|
| Width  | 45 mm    |
| Height | 99 mm    |
| Depth  | 114.5 mm |

#### Ambient conditions

|   |                  |
|---|------------------|
| Ambient temperature (operation)         | -20 °C ... 55 °C |
| Ambient temperature (storage/transport) | -40 °C ... 70 °C |

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## Technical data

### Ambient conditions

|  |   |
|--|---|
| Max. permissible relative humidity (operation) | 75 % (on average, 85% infrequently, non-condensing) |
| Max. permissible humidity (storage/transport)  | 75 % (on average, 85% infrequently, non-condensing) |
| Maximum altitude                               | max. 2000 m (Above sea level)                       |

### Input data

|   |                  |
|---|------------------|
| Nominal input voltage $U_N$                 | 24 V DC          |
| Input voltage range in reference to $U_N$   | 0.85 ... 1.1     |
| Typical input current at $U_N$              | 100 mA           |
| Voltage at input/start and feedback circuit | approx. 24 V DC  |
| Typical response time                       | 15 ms            |
| Typical release time                        | 12 ms            |
| Recovery time                               | 1 s              |
| Status display                              | Green LED        |
| Limit frequency                             | 2 kHz (IN1, IN2) |
|   | 400 kHz (RJ45)   |

### Output data

|                                       |  |
|---------------------------------------|--|
| Contact type                          | 4 enabling current paths                                       |
| Contact material                      | AgNi10, + 5 $\mu$ m Au   |
| Minimum switching voltage             | 100 mV AC/DC   |
| Maximum switching voltage             | 250 V AC/DC (when the gold layer is destroyed)                 |
|                                       | 60 V AC/DC (With gold layer existing)                          |
| Limiting continuous current           | 5 A  |
|                                       | 100 mA (alarm outputs)   |
| Inrush current, minimum               | 1 mA   |
| Maximum inrush current                | 6 A  |
| Sq. Total current                     | $42.25 \text{ A}^2 (I_{TH}^2 = I_1^2 + I_2^2 + I_3^2 + I_4^2)$ |
| Interrupting rating (ohmic load) max. | 67 W (24 V DC, $\tau = 0$ ms)                                  |
|                                       | 36 W (48 V DC, $\tau = 0$ ms)                                  |
|                                       | 43 MW (110 V DC, $\tau = 0$ ms)                                |
|                                       | 68 MW (220 V DC, $\tau = 0$ ms)                                |
| Switching capacity min.               | 1 mW   |
| Output fuse                           | 6 A gL   |

### General

|                         |   |
|-------------------------|---|
| Relay type              | Electromechanical relay with forcibly guided contacts in accordance with EN 50205 |
| Mechanical service life | > 50 x 10 <sup>6</sup> cycles   |
| Net weight              | 365 g   |

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### Technical data

#### General

|   |                           |
|---|---------------------------|
| Mounting type                               | DIN rail mounting         |
| Assembly instructions                       | In rows with zero spacing |
| Degree of protection                        | IP54                      |
|   | IP20                      |
| Min. degree of protection of inst. location | IP54                      |
| Mounting position                           | any                       |
| Control                                     | Two-channel               |
| Parameters as per EN ISO 13849              | 4                         |
| Stop category                               | 0                         |
| Parameters for IEC 61508                    | 3                         |
| Interfaces                                  | Encoder                   |

#### Connection data

|                                       |                     |
|---------------------------------------|---------------------|
| Connection method                     | Screw connection    |
| pluggable                             | Yes                 |
| Conductor cross section solid min.    | 0.2 mm <sup>2</sup> |
| Conductor cross section solid max.    | 2.5 mm <sup>2</sup> |
| Conductor cross section flexible min. | 0.2 mm <sup>2</sup> |
| Conductor cross section flexible max. | 2.5 mm <sup>2</sup> |
| Conductor cross section AWG min.      | 24                  |
| Conductor cross section AWG max.      | 12                  |
| Stripping length                      | 7 mm                |
| Screw thread                          | M3                  |

#### Standards and Regulations

|   |  |
|---|--|
| Designation                                 | Air clearances and creepage distances between the power circuits   |
| Standards/regulations                       | EN 60664/VDE 0110  |
| Rated insulation voltage                    | 250 V  |
| Rated surge voltage/insulation              | 4 kV / Basic isolation, (safe isolation, reinforced insulation and 6 kV between input circuit and enabling current paths.) |
| Pollution degree                            | 2  |
| Overvoltage category                        | III  |
| Safety Integrity Level Claim Limit (SIL CL) | 3  |

#### Classifications

##### eCl@ss

|            |          |
|------------|----------|
| eCl@ss 4.0 | 27371102 |
| eCl@ss 4.1 | 27371102 |

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## Classifications

### eCl@ss

|            |          |
|------------|----------|
| eCl@ss 5.0 | 27371901 |
| eCl@ss 5.1 | 27371901 |
| eCl@ss 6.0 | 27371819 |
| eCl@ss 7.0 | 27371819 |
| eCl@ss 8.0 | 27371811 |

### ETIM

|          |          |
|----------|----------|
| ETIM 2.0 | EC001449 |
| ETIM 3.0 | EC001449 |
| ETIM 4.0 | EC001449 |
| ETIM 5.0 | EC001448 |

### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 30211901 |
| UNSPSC 7.0901 | 39121501 |
| UNSPSC 11     | 39121501 |
| UNSPSC 12.01  | 39121501 |
| UNSPSC 13.2   | 39121501 |

## Approvals

### Approvals

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#### Approvals

UL Listed / cUL Listed / Functional Safety / Functional Safety / UL Listed / cUL Listed / EAC / EAC / cULus Listed

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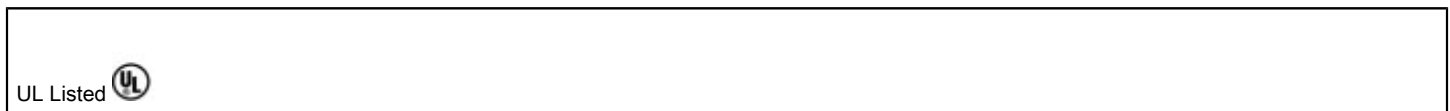
#### Ex Approvals

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#### Approvals submitted

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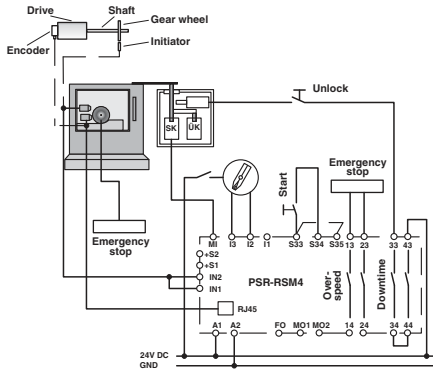
#### Approval details



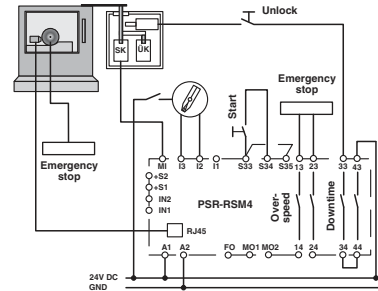


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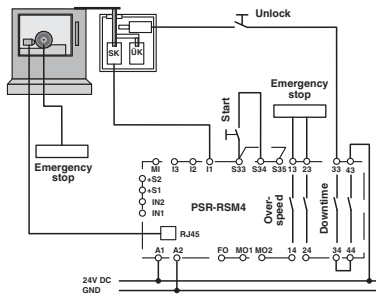
Diagram



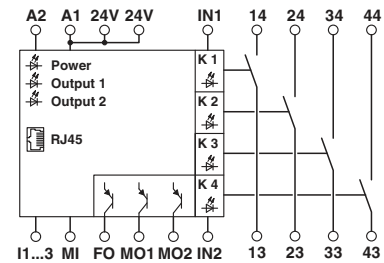
Diagram



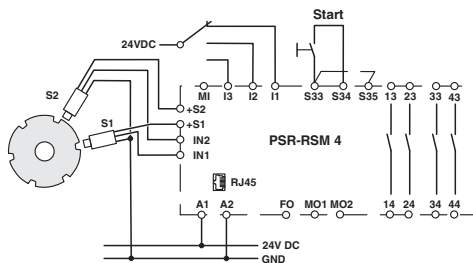
Diagram



Circuit diagram



Circuit diagram



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Application drawing

